bottom 16B of via 16 to replenish additive 114 consumed on and near bottom 16B. Diffusion of additive 114 to or near bottom 16B of via 16 is limited due to the relatively high AR of via 16. This phenomenon can be contrasted to that observed in via 18 which has a low enough AR to allow any additive 114 consumed in via 18 to be readily replenished from the bulk of solution 112.

Please replace the paragraph at page 35, line 20 to page 36, line 3 with the following paragraph.

Once essentially all of the vias and trenches having high ARs have been filled, features with low AR (typically less than about 0.5) need to be filled. This generally is done by substantially conformal filling since the electroplating process is typically governed by electric field and diffusion dependent mechanisms during which additive depletion or side wall closure is not likely. Therefore, a layer of metal approximately equal to the dielectric layer in thickness is generally deposited (typically between 0.7 and 1.4 μm). Use of high currents increases the throughput of the process so long as the currents are not so high as to lead to significant reduction in anode service life or to additive maintenance/degradation. Also, compensation for non-uniformity arising from field shaping, wafer holder design, shielding, etc. is typically done at this phase of the electroplating process. Typical plating rates range from 15 to 75 mA/cm2, more typically from 20 to 50 mA/cm2 , and most typically 25 - 40 mA/cm2. Metal deposited during this phase of the process is commonly removed in part in a subsequent metal planarization step.

IN THE CLAIMS

Please add claims 36-39.

36. (New) A method of electroplating a void-free copper layer onto a surface comprising a field region and a plurality of recessed features, the recessed features having a range of aspect ratios, the surface having a metal seed layer, the method comprising:

immersing said surface into an electroplating solution comprising copper ions, a suppressing additive, and an accelerating additive under conditions wherein an initial dc cathodic current density of between about 0.1 and 5 milliamperes per square centimeter is applied to said surface to prevent dissolution of the seed layer;

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